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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,254	02/20/2004	Jack Bech Nielsen	10168.204-US	1411
25908	7590	04/24/2006	EXAMINER	
NOVOZYMES NORTH AMERICA, INC.			TRAN LIEN, THUY	
500 FIFTH AVENUE			ART UNIT	
SUITE 1600			PAPER NUMBER	
NEW YORK, NY 10110			1761	

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/783,254

Applicant(s)

NIELSEN ET AL.

Examiner

Lien T. Tran

Art Unit

1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

The finality of the office action mailed on 8/11/05 is withdrawn in view of the newly discovered reference(s) to Kilibwa. Rejections based on the newly cited reference(s) follow.

Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maselli et al.

Maselli et al disclose a process of form breakfast cereals. The process comprises the steps of mixing alpha-amylase with cereal grain fraction, cooking the cereal grain, tempering the grains, draining the grains and forming the grains into breakfast cereal shapes. The amount of water ranges from about 20-55%. The tempering period is up to about 48 hours, typically from 2-24 hours. The grains may be formed by shredding, flaking, grinding, extrusion and the like. The enzymatic treatment may begin prior to cooking. The cooking is done to gelatinize the starch. The cereal grain fraction contain from about 25-45% cereal starch. In the production of extruded products, the grains are optionally dried and extruded. Various dies may be used to extrude into cereal shaped pieces. The enzymes are inactivated by heating during conventional baking, toasting and drying steps. (see col. 11 lines 19-50, col. 12 lines 26-30, col. 17 lines 14-35, col. 13 lines 11-25.)

Maselli et al disclose all the steps of the above cited claims. The cooking step is the same as the claimed heating so as to gelatinize the starch. Since the cereal grains are treated with enzyme degrading enzyme and it is subjected to a holding period within the time frame claimed, it is inherent retrogradation of the starch takes place.

Art Unit: 1761

Maselli et al do not disclose forming pellets, frying the pellets in oil, puffing in hot air, the use of maltogenic alpha amylase, pullulanase and the cooling temperature.

Kilibwa teaches that enzymes such as Bacterial amylases, other maltogenic amylases, pullulanase work on the starch fraction; they create low molecular weight sugars and dextrans ( see col. 2 lines 7-12, col. 4 lines 30-35)

Maselli et al teach forming the grains into various breakfast cereal shapes. It would have been obvious to form the cereal into pellets if such shape is desired. This would have been an obvious matter of choice. Maselli et al disclose the shaped pieces may be puffed. Puffing by frying and hot air are well known in the art. It would have been obvious to one skilled in the art to use any known puffing method to puff the formed pieces. Maselli et al teach to add alpha-amylase to convert the starch to dextrans. As shown by Kilibwa, other enzymes such as maltogenic alpha amylase and pullulanase also act on starch to generate dextrans. This shows that all the enzymes ( alpha amylase, maltogenic alpha amylase and pullulanase) have equivalent function. Thus, it would have been obvious to one skilled in the art to use another enzyme which has the same function as required by Maselli et al. It would have been within the skill of one in the art to determine the appropriate cooling temperature.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lien T. Tran whose telephone number is 571-272-1408. The examiner can normally be reached on Tuesday, Thursday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cano Milton can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 21, 2006

*Lien Tran*  
LIEN TRAN  
PRIMARY EXAMINER  
*Group 1700*